

NEW FORMS AND SPECIES OF THE GENUS CATASTICTA—I (PIERIDAE: RHOPALOCERA).

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In making the first complete revision of any large genus of insects the revisor is faced by the problem of unnamed forms. This genus presents a particularly difficult problem in this respect since it seems to contain many very variable species. Whether the varieties of these are worth naming or will only add to the synonymy is always a question. I have used new names only in cases where they seem to be needed for a clearer picture of the group. This paper is devoted to the nova in the revision, now complete and awaiting publication. However, to facilitate the task of other workers I feel that publication now is warranted, particularly since publication of the final papers is still remote because of the great volume of the revision. All forms will be figured in the published revision. This first paper describes material from the author's collection and from the collections in the Zoological Museum, University of Berlin, Germany, and in the National Museum of Natural History, Paris, France.

Catasticta corcyra corcyra female form **linea**, n. form.

Upperside: This form differs from the normal female form, which is identical with the males in pattern and maculation, in the following respects: there is a narrow triangular extension of the dark costal line along the entire length of the discocellulars on the forewing; on the hindwings the nervules are lined with dark scales almost as far as the cell, there is a smudge of dark scales connecting the basad ends of these lines on the median-three and lower radial nervules; the terminals of the lines are greatly expanded into rounded smudges of dark scales on the margin; the dark outline of the entire wing is heavy.

Underside: These surfaces are normal.

Type locality: "Peru."

Repository of type: Zoological Museum, University of Berlin, Germany.

This variation is of the same type as *C. notha* f. *pieridoides* (Felder).

Catasticta prioneris hegamon female form **tincta**, n. form.

This form differs from the typical females in that the white pattern is replaced in bright yellow. It has the same relation to *hegamon* that *flava* Roerber has to *sisammus pitana*.

Type locality: Cachi, Costa Rica.

Repository of type: United States National Museum, Washington, D. C.

Catasticta subflava form **collina**, n. form.

Male—Upperside: Differs in one respect from typical *subflava*, the basic light color is pure white and not pale yellow.

Underside: Identical in maculation with *subflava*. The color differences are the lack of yellow cast over the entire surface on both wings and the replacement of the bright yellow marks with very pale yellow.

Female—Upperside: Similar to the male. The chief difference is that the discal band of white is broader on both wings and free of dark scaling in the interspaces. The outer margin of the band on the hind wings is curved not straight as in the male. The limbal series on both wings is obsolescent.

Underside: as in the males.

Average length of the costal margin of the forewing: 24 mm. (21–25).

Type localities and repositories of the types:

Holotype male: Callanga, Cuzco, Peru, 1500 m.; Zoological Museum, University of Berlin, Berlin, Germany.

Allotype female: Rio Aguacatal, Cauca, Colombia 2000 m.; National Museum of Natural History, Paris, France.

Paratype males 1–3; same data as holotype.

Paratype male 4; Rio Madre de Dios, Peru, 2200 m.; National Museum of Natural History, Paris, France.

Roeber in the addenda to Seitz' *Macrolepidoptera* Volume V considers these specimens in the Staudinger Collection at Berlin to be *susiana*. Although close to that species their general appearance is sufficient to separate them. *Catasticta collina* is a Staudinger manuscript name.

Catasticta chelidonis form **teara**, n. form.

Upperside: This is a pale form of the stem-species. On these surfaces the rich ochre-yellow of the discal zone on *chelidonis* is reduced to buff. The basal dark area on the forewings is expanded slightly restricting the discal band. The nervules are a little more heavily marked than on the type of *chelidonis*.

Underside: The same general statement holds true for these surfaces. The light discal band on the forewing is almost white. The marginal series on the hindwing is produced inwardly somewhat reducing the pearly submarginal markings.

Type locality: San Jacinto, Bolivia, 2000 m.

Repository of the types:

Holotype male and two paratype males all with the same data in the Zoological Museum of the University of Berlin, Berlin, Germany.

The name applied is Staudinger's manuscript under which the specimens stand in the above collections.

Catasticta chelidonis female form **chelalba**, n. form.

In this form of the female the basic dull yellow color is completely replaced by white. On the underside of the wings the yellow streaks and dashes are very pale. One of the paratypes in the Berlin Museum is slightly lemon yellow, not pure white as is the type.

Type localities and repositories of the types:

Holotype: Pararonti, Chapare, Bolivia, February; coll. F. Martin Brown.

Paratypes: Marcapata, Peru, in National Museum of Natural History, Paris, France; Chaco, Bolivia, in Zoological Museum, University of Berlin, Germany; Rio Songo, Yungas, Bolivia, in Zoological Museum, University of Berlin, Germany.

Catasticta chelidonis female form **chelaura**, n. form.

In this form the yellow is replaced by bright orange on the upper surfaces. The underside has a distinct orange tone, possibly to some degree transmitted from the upper surfaces. All the pattern is intensified on the underside.

Type locality and repository of the type:

Holotype: Bolivia, in the Staudinger Coll. at the Zoological Museum, University of Berlin, Germany.

Catasticta suasa **feldera**.

Upside: The maculation is as in *suasa* but much more distinct. This has been brought about by a marked reduction of the suffusion that all but completely obscures the lighter basic color on *suasa*. The light basic color is pale yellow, not white as it is on *suasa*.

Underside: Here the difference in basic color is more clearly seen. The discal band of the forewing of *feldera* is yellow buff and of *suasa* white. On the hindwings the brown marginings of the marginal series almost obliterate the pearly submarginal markings. This is not true of *suasa*.

Female—Upperside: At first glance there seems to be a marked difference between the sexes. However, this is due merely to the absence of suffusion across the discal band of the female. The light color is white, tinged with yellow toward the costal and the anal margins of the hindwings.

Underside: This is the same as in the males, with the discal bands only tinged with yellow.

Type localities and repositories of the types:

Holotype: male—Road between Cocopunco and Pararani, 10,000 to 5,200 feet, Bolivia, March 29, 1926; American Museum of Natural History, New York.

Allotype: female—same locality but taken March 26, 1926; American Museum of Natural History, New York.

Paratypes: males, 1 and 2—Rio Songo, Yungas, 1200 m., Bolivia; Zoological Museum, University of Berlin, Berlin, Germany.

The holotype and allotype were collected by Mr. G. H. H. Tate of the museum staff.

Catasticta philomene form **philomelas**, n. form.

C. chelidonis Roeber not Hopffer, Seitz, *Macrolepid.* V, p. 71.

Male: This form of the species is easily separated from the normal form by the almost total lack of suffusion on the discal band on the upper side of the hindwings and the paler character of the yellow in the maculation on the underside. Roeber in Seitz' *Macrolepidoptera* Vol. V, page 71, confused this form with *C. chelidonis* Hopffer. The name I apply is the one that Staudinger used in manuscript form.

Type locality: Chaco, La Paz, Bolivia, 3-5000 m., Bolivia.

Repository of types: Holotype and five paratype males, all the same data, Zoological Museum, University of Berlin, Berlin, Germany.

Catasticta philomene punctata form **hypoleuca**, n. form.

This form bears the same relation to *punctata* that *philomelas* does to *philomene*. The discal bands are lighter in color and broader. The overscaling of dark color in these bands is greatly reduced giving them a distinctly white appearance rather than greenish as in *punctata*. On the underside the discal band of the forewing is white and a little broader than in *punctata* and the yellow maculations a little smaller.

Type localities and repositories of the types:

Holotype: male, Callanga, Prov. of Cuzco, Perú, 1500 m. Zoological Museum of University of Berlin, Germany.

Paratype: male, Rio Madre de Dios, 2200 m., Perú. National Museum of Natural History, Paris, France.

The name is one in Staudinger's manuscript found on the male type.

Catasticta philomene race **philodora**, n. race.

Upperside: Resembles closely the Bolivian form *philomene*, differing from it in having all of the lighter areas slightly larger. The dark limbal band on the hindwing barely encroaches upon the cell. The limbal spots are about twice as large as on *philomene*, and the marginal spots on the hindwing are much more evident.

Underside: These surfaces also resemble those of *philomene*, however, the yellow ground color seems to be a little darker, and all of the yellow spots, especially on the hindwing, much larger. There is also considerable yellow scaling in the apical region of the forewing.

Holotype: a male, Rio Blanco, Rio Pastazo watershed, Eastern Ecuador. 2,000 meters, April 10, 1936.

Paratypes: 1-14—same data as type. Collected between April 2, and May 1, 1936.

15—Baños, Ecuador. 2,000 meters. February 2, 1936.

16—same data. February 28, 1936.

18-19—Rio Pastazo watershed. 1,600 meters. Ecuador. April 2, 1936.

20—Guama, Rio Pastazo watershed. 2,500 meters. May, 1936.

21—Yungilla, Rio Pastazo, Ecuador. 1,800 meters. September 16, 1936.

All of the specimens were collected by Mr. William Clark-MacIntyre. They are in the coll. of F. Martin Brown.

Catasticta distincta form **ecuadora**, n. form.

Male—Upperside: This differs from typical *distincta* in the basic light color. In *distincta* this is pure white, in *ecuadora* pale yellow. This changes the general appearance so completely as to warrant a varietal name. In addition the anal angle of the hindwing is slightly produced, a character not found in *distincta*.

Underside: The maculation is as in *distincta*. A pale yellowish cast over these surfaces gives this form a warmer appearance than that of *distincta*.

Type localities:

Holotype: Rio Blanco, near Baños, Ecuador, 2,000 m., April 17, 1936.

Paratypes: 65 males, same locality, taken between April 2, 1936, and April 17, 1936.

There are over 100 additional specimens from Baños, 1800 m.; Abitagua, 1000 m.; Yungilla, 1800 m.; Viscaya, 2500 m. and Rio Pastazo 1600 m. Specimens from all points in the Rio Pastazo watershed were taken during April and May. These were collected by Mr. William Clarke-MacIntyre and are in the collection of F. Martin Brown. This form may be more closely related to *philone* than to *distincta*.

Catasticta philone ecuadora form **pastaza**, n. form.

Upperside: Similar to *ecuadora*, but the ground color is a bright orange yellow instead of canary yellow, as in the typical form. This is heavily overlaid with the dark scales of the pattern color. The limbal light spots are of a much lighter tone of yellow than the discal and basal area.

Underside: The difference in the basal color is readily recognized on this surface. In addition the limbal spots of the forewing are a little bit larger, decreasing the width of the dark inner margin of the limbal band. There seems to be slightly more of the light color in the cell and in the basal area than on the typical form.

Type locality: Rio Blanco, Rio Pastazo watershed, Eastern Ecuador. 2,000 meters. (Rio Blanco is about 8 miles from Baños, Tunguhua.)

Holotype: A male taken April 14, 1936.

Paratypes: 1 and 2—same data as the type.

3 and 4—same data, except date which is April 10, 1936.

5 and 6—same data as the type; taken on April 17, 1936.

7—Santa Ana, Rio Pastazo watershed, Eastern Ecuador. 2,000 meters. June, 1936.

8—Viscaya, Rio Pastazo watershed, Eastern Ecuador. 2,000 meters. June, 1936.

All specimens were collected by Mr. William Clark-MacIntyre. This form seems to constitute about 15% of the specimens taken at this time of the year. The type is to be deposited at the American Museum of Natural History, New York City, and paratype one at the British Museum of Natural History, in London.

Catasticta tanoia, n. sp. ✓

Upperside: This surface presents the appearance of a miniature *sordida*. The limbal spots on the hindwing, although the same shape, are possibly a little clearer at their points.

Underside: This surface is quite different from *sordida* on the hindwings. The limbal dark band is extended based almost to the origin of the M_1 nervule, thus narrowing the discal band considerably. The dark marginings of the marginal series is heavy and not uniformly wide. It almost obliterates all of the pearly white submarginal scaling. The limbal series is conspicuous and situated in the outer half of the band. This allows all the inner half, perhaps a little more, to be very dark seal brown. The discal band is almost entirely taken up by the broad transverse yellow streaks. The basal dark areas extend to the origin of the R_s nervule and contains the usual yellow dashes. The basal red spots are small.

Length of costal margin of forewing: 24 mm.

Type: a male, Coroicio, Yungas, Bolivia, in the Staudinger collection in the Zoological Museum, University of Berlin, Germany. The name is Staudinger's manuscript designation.

Catasticta flisa form **maya**, n. form.

Upperside: This form varies in the opposite direction from that taken by *dilutior*. The white scaling is greatly reduced. The marginal and limbal series of spots are absent. The discal band on the forewing is reduced to two obsolescent spots between the Cu_2 and the A_2 nervules.

Underside: Typical of the species.

Type: a male from Copán, Guatemala, in the National Museum of Natural History, Paris, France.

A few Mexican and Central American specimens that I have seen approach it.

Catasticta seitzi zana.

Upperside: This is almost identical with *zancla* Felder. The distinct inner margin of the limbal band on the hindwings

usually reaches the Cu_1 nervule. This differs from *zanle* Felder, however, in the shape of the forewing which is the same as that of *seitzi*. It differs from *seitzi* in the great reduction of the overscaling on the hindwings and somewhat on the forewings. The limbal and the marginal series of spots are larger than on *seitzi*. The basic light color is ochre as on *seitzi*, not pale straw as on *zanle*.

Underside: This is identical with *seitzi* in shape and distribution of the maculation but is a little lighter in color.

Average length of the costal margin of the forewing: 24 mm.

Type localities and repositories of the types:

Holotype: male, Fusagasuga, Colombia, coll. of the author.

Paratypes: one male "Colombia" in British Museum of Natural History; one male "Colombia," one male Bogotá, in National Museum of Natural History, Paris, France; four males "Colombia" in Zoological Museum, University of Berlin, Germany; one male from type locality in Zoological Museum at Tring, England; one male, Muzo, Colombia, in Coll. of author; and over 150 specimens from various localities on the Rio Pastazo in Ecuador that are slightly more brilliant than the type—which may be due to aging of the type.

Catasticta cinerea form **dusca**, n. form.

Upperside: This form is characterized by great extension of the dark scaling on the nervules almost obliterating all light scaling on both wings. On the hindwings the limbal band reaches the origin of the M_1 and Cu_2 nervules. The inner margin of the band is almost straight.

Underside: The forewings are much darker than those of *cinerea* and the discal areas reduced. The limbal band on the hindwings is hardly differentiated into a light and dark portion. The limbal series of streaks of yellow is almost obliterated by dark overscaling.

Average length of costal margin of forewing: 29 mm.

Type and paratype localities and repositories: two males, Chaco, La Paz, Bolivia, 2000–3000 m., in the Zoological Museum, University of Berlin, Germany.

Catasticta semiramis form **palla**, n. form.

Upperside: Much lighter than the average run of *semiramis*. The discal bands are a little broader and the basal dark areas lighter. The pattern color is warm light chocolate brown instead of black-brown.

Underside: This is the same as in *semiramis*, but much warmer in tone because of the difference in pattern color.

Length of the costal margin of the forewing: 27 mm.

Type locality and repository: a female, Popayán, Cauca, Colombia, in the Zoological Museum, University of Berlin, Germany.

The form is a little larger than the normal females. It may be a full species but I doubt it. The type was taken by Stübel and bears an identification label "*Archonias zancle* Feld" in Weymer's manuscript. I have males approaching this form from the western part of Colombia and so do not designate this as a female form.

Catasticta apaturina form **citra**, n. form.

Upperside: On this form the discal bands are yellow, pale on the forewings and bright canary yellow on the hindwings.

Underside: The discal band of the forewings is white. On the hindwings the yellow markings are an intense canary yellow and broader than on the typical form. The basic light color is tinged with yellow.

Length of the costal margin of the forewings: 20 mm.

Type locality and repository: a male, Quiroz, Peru, 960 m., January, in coll. of author.

Catasticta quiroza, n. sp. ✓

Upperside: This is very much like the corresponding surface of *chrysolopha*. The shape of the wings is, however, distinct. The forewings are shaped as in *truncata*, cutting back deeply between the M_2 and M_3 and with a clipped appearance to the apex. The hindwings are strongly dentate on the nervules. The limbal series are less prominent than on most specimens of *chrysolopha*. The discal band on the forewing is rich orange, not bicolored as on *chrysolopha*.

Underside: This surface is marked as on *chrysolopha*, but the lines are a little heavier.

Average length of costal margin of forewing: 20 mm.

Type and paratypes: four males, Quiroz, Junín, Perú 960 m., in coll. of author.